CLAIM AMENDMENTS

1–6. (canceled)

7. (previously presented): A method of manufacturing a semiconductor circuit on a substrate, comprising the steps of:

providing first and second substrate handling robots;

coupling a first process chamber to the first robot so that the first robot can transfer a substrate into and out of the first process chamber, wherein the first process chamber is a deposition chamber or a plasma chamber, and wherein the first process chamber is not coupled to the second robot;

coupling a second process chamber to the second robot so that the second robot can transfer a substrate into and out of the second process chamber, wherein the second process chamber is a deposition chamber or a plasma chamber, and wherein the second process chamber is not coupled to the first robot;

coupling one or more pass-through chambers to both the first robot and the second robot so that both the first robot and the second robot can transfer a substrate into and out of each of the pass-through chambers, wherein said one or more pass-through chambers include a first pass-through chamber; and

subsequently performing the sequential steps of:

the first robot transferring a first substrate into the first pass-through chamber;

heating said first substrate within the first pass-through chamber; and

the second robot removing said first substrate from the first pass-through chamber.

8. (previously presented): A method according to claim 7, further comprising the subsequent step of:

the second robot transferring said first substrate to the second process chamber.

9. (previously presented): A method according to claim 8, further comprising the subsequent sequential steps of:

the second robot removing said first substrate from the second process chamber;

the second robot transferring said first substrate into one of the pass-through chamb

the first robot removing said first substrate from said one pass-through chamber; an

the first robot transferring said first substrate to the first process chamber.

10. (previously presented): A method according to claim 9, wherein said one pass-through chamber is the first pass-through chamber.

11. (previously presented): A method according to claim 9, further comprising the steps of:

after the step of the second robot transferring said first substrate to the second process chamber, depositing tantalum or tantalum nitride on the substrate within the second process chamber; and

after the step of the first robot transferring said first substrate to the first process chamber, depositing copper on the substrate within the first process chamber.

12. (previously presented): A method according to claim 9, further comprising the steps of:

after the step of the second robot transferring said first substrate to the second process chamber, removing native oxide from the surface of the substrate within the second process chamber; and

after the step of the first robot transferring said first substrate to the first process chamber, depositing copper on the substrate within the first process chamber.

13. (previously presented): A method according to claim 12, further comprising the steps of:

coupling a third process chamber to the second robot so that the second robot can transfer a substrate into and out of the third process chamber, wherein the third process chamber is not coupled to the first robot;

after the step of removing native oxide and before the step of the second robot transferring the first substrate into one of the pass-through chambers, performing the sequential steps of:

the second robot removing the first substrate from the second process chamber;

the second robot transferring the first substrate into the third process chamber; and

within the third process chamber, depositing tantalum or tantalum nitride on the first substrate.

14. (currently amended): A method according to claim 7, further comprising the steps of:

coupling a loadlock chamber to one of said first and second robots so that said one robot can transfer a substrate into and out of the loadlock chamber, wherein the loadlock chamber is not coupled to the other one of said first and second robots, and wherein the loadlock chamber is not coupled to any of said one or more pass-through chambers; and

before the step of the first robot transferring said first substrate into the first pass-through chamber, said one robot removing said first substrate from the loadlock chamber.

15. (currently amended): A method according to claim 7, further comprising the steps of:

coupling a loadlock chamber to one of said first and second robots so that said one robot can transfer a substrate into and out of the loadlock chamber, wherein the loadlock chamber is not coupled to the other one of said first and second robots, and wherein the loadlock chamber is not coupled to any of said one or more pass-through chambers; and

after the step of the second robot removing said first substrate from the first pass-through chamber, said one robot transferring said first substrate into the loadlock chamber.

16. (currently amended): A method according to claim 7, further comprising the steps of:

coupling a loadlock chamber to the first robot so that the first robot can transfer a substrate into and out of the loadlock chamber, wherein the loadlock chamber is not coupled to the second robot, and wherein the loadlock chamber is not coupled to any of said one or more pass-through chambers; and

before the step of the first robot transferring said first substrate into the first pass-through chamber, the first robot removing said first substrate from the loadlock chamber.

17. (currently amended): A method according to claim 8, further comprising the steps of:

coupling a loadlock chamber to the first robot so that the first robot can transfer a substrate into and out of the loadlock chamber, wherein the loadlock chamber is not coupled to the second robot, and wherein the loadlock chamber is not coupled to any of said one or more pass-through chambers; and

after the step of the second robot transferring said first substrate to the second process chamber, the subsequent steps of:

the second robot transferring said first substrate into one of the pass-through chambers;

the first robot removing said first substrate from said one pass-through chamber; and

the first robot transferring said first substrate into the loadlock chamber.

18. (previously presented): A method according to claim 7, further comprising the step of:

providing a resistive heater within the pass-through chamber;

wherein the heating step comprises the step of said resistive heater heating said first substrate within the pass-through chamber.

19. (previously presented): A method according to claim 7,wherein the heating step comprises the step of:

directing infrared radiation so as to heat said first substrate within the pass-through chamber.

20. (previously presented): A method of depositing a copper layer on a substrate, comprising the steps of:

providing first and second substrate handling robots;

coupling a first process chamber to the first robot so that the first robot can transfer a substrate into and out of the first process chamber, wherein the first process chamber is a deposition chamber or a plasma chamber, and wherein the first process chamber is not coupled to the second robot;

coupling a second process chamber to the second robot so that the second robot can transfer a substrate into and out of the second process chamber, wherein the second process chamber is a deposition chamber or a plasma chamber, and wherein the second process chamber is not coupled to the first robot;

coupling one or more pass-through chambers to both the first robot and the second robot so that both the first robot and the second robot can transfer a substrate into and out of each of the pass-through chambers, wherein said one or more pass-through chambers include a first pass-through chamber; and

subsequently performing the sequential steps of:

the first robot transferring a first substrate into the first pass-through chamber;

heating said first substrate within the first pass-through chamber;

the second robot removing said first substrate from the first pass-through chamber;

the second robot transferring said first substrate to the second process chamber;

within the second process chamber, depositing tantalum or tantalum nitride on the substrate;

the second robot transferring said first substrate into one of the pass-through chambers;

the first robot removing said first substrate from said one pass-through chamber;

the first robot transferring said first substrate into the first process chamber; and

within the first process chamber, depositing copper on the substrate.

21. (previously presented): A method of depositing a copper layer on a substrate, comprising the steps of:

providing first and second substrate handling robots;

coupling a first process chamber to the first robot so that the first robot can transfer a substrate into and out of the first process chamber, wherein the first process chamber is a deposition chamber or a plasma chamber, and wherein the first process chamber is not coupled to the second robot;

coupling a second process chamber to the second robot so that the second robot can transfer a substrate into and out of the second process chamber, wherein the second process chamber is a deposition chamber or a plasma chamber, and wherein the second process chamber is not coupled to the first robot;

coupling one or more pass-through chambers to both the first robot and the second robot so that both the first robot and the second robot can transfer a substrate into and out of each of the pass-through chambers, wherein said one or more pass-through chambers include a first pass-through chamber; and

subsequently performing the sequential steps of:

the first robot transferring a first substrate into the first pass-through chamber;

heating said first substrate within the first pass-through chamber;

the second robot removing said first substrate from the first pass-through chamber;

the second robot transferring said first substrate to the second process chamber;

within the second process chamber, removing native oxide from the surface of the substrate;

the second robot transferring said first substrate into one of the pass-through chambers;

the first robot removing said first substrate from said one pass-through chamber;

the first robot transferring said first substrate into the first process chamber; and

within the first process chamber, depositing copper on the substrate.

22. (previously presented): A method according to claim 21, further comprising the steps of:

coupling a third process chamber to the second robot so that the second robot can transfer a substrate into and out of the third process chamber, wherein the third process chamber is not coupled to the first robot; and

after the step of removing native oxide and before the step of the second robot transferring the first substrate into one of the pass-through chambers, performing the sequential steps of:

the second robot removing the first substrate from the second process chamber;

the second robot transferring the first substrate into the third process chamber; and

within the third process chamber, depositing tantalum or tantalum nitride on the first substrate.